

REMARKS/ARGUMENTS

The courteous telephone interview granted applicants' undersigned attorney by Examiner Sulaiman Nooristany on July 6, 2010 is hereby respectfully acknowledged. The arguments presented in the interview are set forth below.

Claims 2, 12, 13, 16, 26, 27, and 30 are amended, claims 31, 32, 34, 37, and 38 are canceled, and claims 40-42 are added herein. With entry of this amendment, claims 2, 5, 6, 8, 12-14, 16, 19, 20, 22, 26-28, 30, 33, 35, 36, and 39-42 will be pending.

Claims 16 and 26 have been amended to specify a non-transitory computer readable medium, as requested by the Examiner. The pending rejections under 35 U.S.C. 101 should therefore be withdrawn.

Claims 2, 5, 6, 8, 12-14, 16, 19, 20, 22, 26-28, and 30-36 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,331,983 (Haggerty et al.) in view of U.S. Patent No. 6,331,983 (Regan).

Claims 2, 16, and 30 are directed to a method, computer-readable storage medium, and apparatus for operating a node in a layer 2 network to handle multicast traffic. These claims have been amended to specify that the attraction point is a root bridge, that the join messages are forwarded towards the attraction point without the use of layer 3 routers, and that multicast traffic is forwarded towards the root bridge via a port selected according to the spanning tree.

Haggerty et al. describe multicast switching. As noted in the Abstract, the invention provides for controlled multicast traffic between router based networks and switch based networks. The switches implement layer 3 switching and do not exchange multicast routing protocol messages (col. 14, lines 6-27). Conventional systems such as Haggerty et al. require the presence of layer 3 routers in the network and that join messages (e.g., IGMP joins) are forwarded only towards the routers in the network. The claimed invention uses an attraction point that is a layer 2 switch, thus allowing the system to operate without the presence of any layer 3 routers. In contrast to the claimed

invention, Haggerty et al. describe an interswitch messaging protocol for use in establishing a connection. The connection setup messages do not follow spanning tree.

Furthermore, the join messages of Haggerty are not transmitted between switches, instead they are transmitted from a local host to a switch. Thus, Haggerty does not teach forwarding an IGMP join message from a switch towards another switch in a layer 2 network.

As noted by the Examiner Haggerty et al. do not teach establishing state information at the switch.

Regan et al. disclose a network device comprising a link state database. There is no teaching of establishing multicast state information at a switch for a multicast distribution group based on join messages.

Accordingly, claims 2, 16, and 30 are submitted as patentable over Haggerty et al. and Regan.

Claims 4-6, 8, and 31-33, depending from claim 2, and claims 18-20 and 22, depending from claim 16, are submitted as patentable for at least the same reasons as their base independent claims.

Claims 5 and 19 are further submitted as patentable over the cited references which do not show or suggest flooding a join message via a spanning tree. In rejecting the claims, the Examiner refers to col. 15, lines 20-22 of Haggerty et al. This section of the patent describes tree formation and has nothing to do with sending join messages. Haggerty et al. simply note that for switches that do not have LSP, a backup flood style mechanism can be used in tree formation. There is no flooding of join messages or flooding via a spanning tree.

Claims 6 and 20 are further submitted as patentable over the cited references which do not show or suggest forwarding a join message via one or more ports which an attraction point advertisement message was previously received. As discussed further below, the cited references do not teach attraction point advertisement messages.

Claims 12, 13, 26, and 27 are submitted as patentable for at least the same reasons as claim 2. These claims include reference to the IGMP join messages described above. Furthermore, the Examiner has failed to point to any teaching of flooding an advertisement message establishing a node as an attraction point for a multicast distribution group. In rejecting claims 12, 13, 26, and 27, the Examiner simply points to the rejection of claim 2, however, this limitation was not included in claim 2. Conventional multicast distribution is sent to a specified receiver or forwarder, thus, there is no need to advertise an attraction point for multicast traffic addressed to a multicast distribution group.

Applicants' invention, as set forth in the claims, is particularly advantageous in that the advertisement messages efficiently build up a multicast distribution tree. Forwarding of multicast data traffic is optimal since a data packet is not sent via a branch which does not have any interested routers.

Accordingly, claims 12, 13, 26, and 27, and the claims depending therefrom, are submitted as patentable over the cited references.

Claims 13 and 27 are further submitted as patentable over the cited references which do not show or suggest an attraction point that is a first hop switch connected to a source node.

For the foregoing reasons, Applicants believe that all of the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite prosecution of the application, please do not hesitate to call the undersigned at (408) 399-5608.

Respectfully submitted,



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